

Maryland Historical Trust

Maryland Inventory of Historic Properties Number: E-4-116

Name: US40 over Middle Creek

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridged received the following determination of eligibly.

MARYLAND HISTORICAL TRUST	
Eligibility Recommended <u>X</u>	Eligibility Not Recommended _____
Criteria: <u>  </u> A <u>  </u> B <u>  </u> C <u>  </u> D Considerations: <u>  </u> A <u>  </u> B <u>  </u> C <u>  </u> D <u>  </u> E <u>  </u> F <u>  </u> G <u>  </u> None	
Comments: _____ _____ _____	
Reviewer, OPS: <u>Anne E. Bruder</u>	Date: <u>3 April 2001</u>
Reviewer, NR Program: <u>Peter E. Kurtze</u>	Date: <u>3 April 2001</u>

Maryland Inventory of Historic Properties  
Historic Bridge Inventory  
Maryland State Highway Administration  
Maryland Historical Trust

MHT Number F-4-116

**SHA Bridge No.** 10031 **Name:** US 40 over Middle Creek

**Location:**

**Street/Road Name and Number:** US 40 (National Pike)

**City/Town:** Myersville **Vicinity** X

**County:** Frederick

**Ownership:** X State    County    Municipal    Other

**This bridge projects over:**    Road    Railway X Water    Land

**Is the bridge located within a designated district:**    yes X no  
   NR listed district    NR determined eligible district  
   locally designated    other  
Name of District

**Bridge Type:**

   Timber Bridge

   Beam Bridge    Truss-Covered    Trestle

   Timber-and-Concrete

   Stone Arch

   Metal Truss

   Movable Bridge

   Swing    Bascule Single Leaf    Bascule Multiple Leaf

   Vertical Lift    Retractable    Pontoon

   Metal Girder

   Rolled Girder    Rolled Girder Concrete Encased

   Plate Girder    Plate Girder Concrete Encased

   Metal Suspension

   Metal Arch

   Metal Cantilever

X Concrete

X Concrete Arch    Concrete Slab    Concrete Beam    Rigid Frame

   Other Type Name

**Describe Setting:**

Bridge 10031 carries US 40 over Middle Creek in Frederick County. US 40 runs east-west over the northern flowing Middle Creek. The bridge is located in a rural, agricultural region with sparse development. The bridge carries two lanes in opposing directions and is located between Hagerstown and Frederick. US 40 is on a 3.16% upgrade in the area of the bridge.

**Describe Superstructure and Substructure:**

Bridge 10031 is a double span, filled concrete arch with carefully dressed stone veneers on all faces and arch rings. The arch is on a 60-degree skew. The bridge carries a 40-foot clear roadway. The length of the bridge is 144 feet, with clear arch spans of approximately 58 feet at the springing line. The full cantilevered reinforced concrete wingwalls terminate at the arches with full height pilasters and the walls are laid on gentle horizontal curves. The arch has 1 foot 8 inch vertical concrete parapets with caps and short curbs. All surfaces of the bridge are faced with Woodstock granite. The piers, which also consist of reinforced concrete, have a starling at each nose. The arch is earthen filled and is topped with a bituminous concrete road section.

The bridge has been rated in satisfactory condition with a sufficiency rating of 97.5. The latest inspection report is dated 1996, and notes fine, irregular cracking in all elements and surfaces. There are signs of loose mortar, efflorescence and stalactites. Stream erosion was indicated in the report.

**Discuss Major Alterations:**

There have been no major alterations to this structure except patching and mortar repair. In 1995 repairs were made to the riprap slope protection and the arch drainage devices. There was a washout at the southwest wingwall in December 1994.

**When Built:** 1936

**Why Built:** Relocation and Widening of US 40 between Frederick and Hagerstown

**Who Built:** State Roads Commission

**Who Designed:** State Roads Commission

**Why Altered:** N/A

**Was this bridge built as part of an organized bridge building campaign?**

Yes, this bridge was built as part of the relocation and widening of US 40 between Frederick and Hagerstown. Scenic US 40 was originally chartered in 1792 by Maryland as a turnpike from Frederick to Cumberland; it was a segment of the Baltimore-Cumberland Turnpike. The road, eventually known as the National Pike (as distinct from the National Road), was financed by various Maryland banks, and construction began in 1816. The road was completed to Cumberland by 1823. The turnpike ceased operations in 1889, when a storm wrecked bridges on the road, and the bridges were not rebuilt. The road had fallen into disrepair by the early-twentieth century, when the "Good Roads" Act of 1916 provided federal funding for road improvements. The National Pike was designated US 40 in the mid-1920s.

**Surveyor Analysis:**

**This bridge may have NR significance for association with:**

☒ **A Events**      ☐ **Person**

☒ **C Engineering/Architectural**

This bridge was determined eligible by the Interagency Review Committee in February 1996.

**Was this bridge constructed in response to significant events in Maryland or local history?**

In the time period after the Great Depression and prior to World War II, America was in the midst of many public works projects. These projects upgraded various portions of the infrastructure to meet the demands of a modernized society and its associated population growth. The projects also bolstered the economy by

employing large segments of the population who were having difficulties finding employment. By the late 1930s several factors including the increases in motor vehicle usage, number of motor vehicles, and modernization of cars and trucks for higher speed and loads, resulted in a tremendous strain placed on the existing road system in Maryland. To meet the requirements of this increased traffic volume and wisely providing for future increases, a proposed Statewide arterial system was planned.

The relocation of the National Pike between Frederick and Hagerstown did not have at that time sufficient volume to warrant the cost of a dual highway. However, right of way was acquired to permit the dualization of the highway. The relocated road was constructed in such a way that the 40-foot roadway could become the westbound lane of a dual highway.

The relocation of US 40 included the construction of many highway bridges and culverts. The designers considered the nature of the surrounding terrain and the existing historical landscape. A decision was therefore made to face the prominent structures with granite simulating the area's nineteenth-century stone arches. This action also stimulated the need for stone masons, a requirement in sync with the intent of public works projects to provide employment for skilled artisans.

**When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?**

Yes, Bridge 10031 was built as part of a relocation of US 40. Although there had been a road between Frederick and Hagerstown since 1806 this modern roadway allowed for increased traffic loads and included the features of modern geometric design, allowing both higher speed and greater safety. The associated increase in traffic after the highway was completed allowed for greater regional development.

**Is the bridge located in an area that may be eligible for historic designation and would the bridge add to or detract from historic and visual character of the possible district?**

No the bridge is not located in an area which is eligible for historic designation.

**Is the bridge a significant example of its type?**

Yes this bridge is a significant example of a double-span concrete arch built during the 1930s. The prominent features of this structure are its stone façade and the arch itself. A more simple, less costly structure such as a steel beam bridge could have been built at this location, but would not have blended with the nineteenth-century stone structures which dot this region.

**Does the bridge retain integrity of the important elements described in the Context Addendum?**

Yes this bridge retains integrity of its character defining elements. Although some repairs were made to the wingwalls, the barrel, the spandrel walls, the parapets, and the abutments, all are original and have only moderate deterioration.

**Is the bridge a significant example of the work of the manufacturer, designer, and/or engineer and why?**

Yes this bridge is a significant example of the State Roads Commission effort from 1910 until 1945 to eliminate dangerous geometric alignments. The development of standardized plans helped to facilitate this process.

**Should this bridge be given further study before significance analysis is made and why?**

No this bridge should not be given further study.

**Bibliography:**

County inspection/bridge files \_\_\_\_\_ SHA inspection/bridge files   X  

Other (list):

Johnson, Arthur Newhall

1899    The Present Condition of Maryland Highways. In *Report on the Highways of Maryland*. Maryland Geological Survey, The Johns Hopkins University Press, Baltimore.

P.A.C. Spero & Company and Louis Berger & Associates

1995    Historic Highway Bridges in Maryland: 1631-1960: Historic Context Report. Maryland State Highway Administration, Maryland State Department of Transportation, Baltimore, Maryland.

State Roads Commission

1958    *A History of Road Building in Maryland*. State Roads Commission of Maryland, Baltimore, Maryland.

Tyrrell, H. Grattan

1909    *Concrete Bridges and Culverts for Both Railroads and Highways*. The Myron C. Clark Publishing Company, Chicago and New York.

**SURVEYOR:**

Date bridge recorded   December 1997  

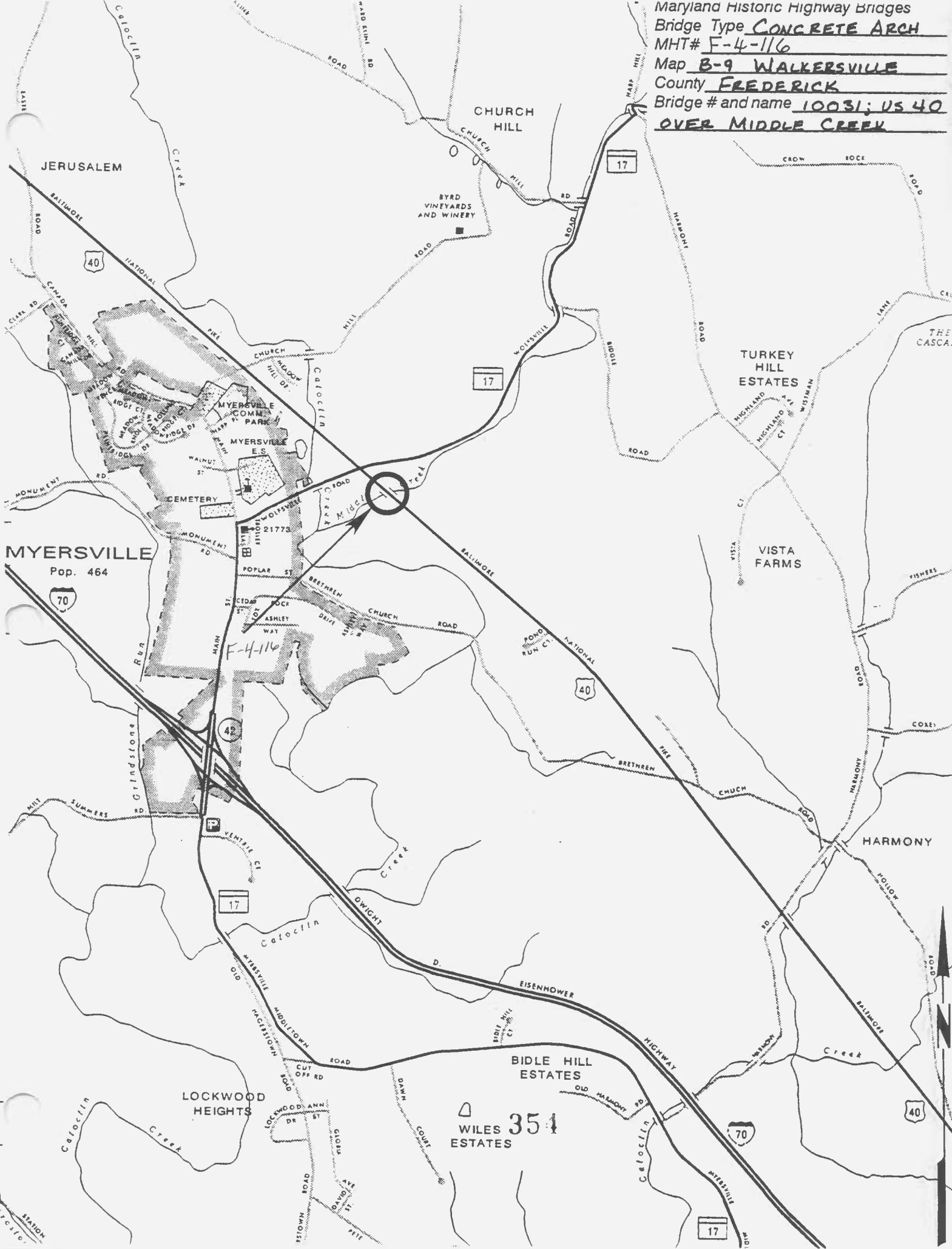
Name of surveyor Wallace, Montgomery & Associates / P.A.C. Spero & Company

Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Baltimore, MD 21204

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FAX number (410) 296-1670

Maryland Historic Highway Bridges  
Bridge Type CONCRETE ARCH  
MHT# F-4-116  
Map B-9 WALKERSVILLE  
County FREDERICK  
Bridge # and name 10031; US 40  
OVER MIDDLE CREEK



WILES 354  
ESTATES



Inventory # F-4-116

Name 10031-US40 OVER MIDDLE CREEK  
County/State FREDERICK COUNTY/MD  
Name of Photographer FRANK JULIANO  
Date 2/95

Location of Negative SWA

Description APPROACH EAST

Number 19 of 36 48





Inventory # F-4-116

Name 10031-US40 OVER MIDDLE CREEK

County/State FREDERICK COUNTY | MD

Name of Photographer FRANK JUMANO

Date 2/95

Location of Negative SHA

Description ELEVATION LOOKING SOUTH

2  
Number 112 of 3648



Inventory # F-4-116

Name 10031- US40 OVER MIDDLE CREEK

County/State FREDERICK COUNTY/MD

Name of Photographer FRANK JULIANO

Date 2/95

Location of Negative SHA

Description APPROACH WEST

Number 3 of 35 ~~48~~



Inventory # F-4-116

Name 10031-US40 OVER MIDDLE CREEK

County/State FREDERICK COUNTY/MD

Name of Photographer FRANK JULIANO

Date 2/95

Location of Negative SHA

Description ELEVATION LOOKING NORTH

4  
Number 12 of 35 AB



1. F-4-116
2. 1003F, U.S. 40 OVER MIDDLE CREEK
3. FREDERICK COUNTY
4. WALLACE, MONTGOMERY & ASSOC.
5. 12/97
6. MD SHPD
7. ELEVATION LOOKING DOWNSTREAM
8. 5 OF 8





1. F-4-114
2. 10031, US. 40 OVER MIDDLE CREEK
3. FREDERICK COUNTY
4. WALLACE, MONTGOMERY & ASSOC.
5. 12/47
6. MD SHPO
7. ELEVATION LOOKING UPSTREAM
8. 6 OF 8



1. F-4-116
2. 10031, U.S. 40 OVER MIDDLE CREEK
3. FREDERICK COUNTY
4. WALLACE, MONTGOMERY & ASSOC.
5. 12/97
6. MD SHPO
7. LOOKING WEST
8. 7 OF 8



1. K-4-112a
2. 10031, U.S. 40 OVER MIDDLE CREEK
3. FREDERICK COUNTY
4. WALLACE, MONTGOMERY & ASSOC.
5. 12/97
6. MD SHPO
7. LOOKING EAST
8. 8 OF 8